

## Prevalence of Malnutrition among Tribal Women

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### Abstract

*Introduction:* A healthy citizen contributes to the development of a country. Tribes are considered as the primitive groups who are back ward and have a shyness to contact with the community for their health services. So there is a need to look into their health status. *Aims:* the study aimed to assess the prevalence of malnutrition and associated barriers among tribal women of Kasaragod district, Kerala *Settings and Design:* the tribal settlements of Karadukka block panchayaths of Kasaragod district was selected randomly as the setting and the design adopted was a mixed method design (Explanatory design; follow up explanations model (QUAN→qual)) *Methods and Material:* a descriptive survey was undertaken among 445 tribal women in the reproductive age group from the selected tribal settlements and bio physiological measurements like weight in Kilogram, Height in Metre was collected using calibrated weighing machine, measuring tape and BMI was classified as underweight, normal and overweight. An unstructured interview was done for collecting data on associated barriers. Analysis was done using spss 16 and Strauss and Corbins grounded theory analysis approach. *Statistical analysis used:* frequency and percentage distribution was done for identifying the prevalence of malnutrition and Strauss and Corbins grounded theory analysis approach for associated barriers. *Results:* the study found that majority (54%) of participants had normal Body Mass Index, but 24% had severe thinness and 18% had mild thinness. *Conclusions:* Among tribal women majority have malnutrition which is an indicator of the health status. In order to provide them with good health status Government and health professionals have to identify the causes and interfere in that through various promotive and therapeutic activities.

**Keywords:** Malnutrition; Tribal Women; Prevalence; Associated Barriers.

### Introduction

*"Healthy citizens are the greatest asset any country can have"- Winston Churchill*

A healthy citizen contributes to the development of a country. Tribes are considered as the primitive groups who are back ward and have a shyness to contact with the community for their rights and services. Health care system should take efforts to reduce the health problems among tribes and reduce their vulnerability to become a backward group. The statistics shows that tribal population

contributes to an important portion of the population both in India and Kerala. According to 2011 census report there are 10,42,81,034 scheduled tribes in India and in Kerala there are 4,84,839 scheduled tribes which includes 246636 females. Among 13,02,600 populations in Kasaragod district, there are 29,283 scheduled tribes (Census of India, 2011) Reviews show that studies had been conducted in many parts of India to identify the health problems among tribal women. Birdi, Joshi, Kotian, Shah (2014) conducted a study to identify the malnutrition among different age groups in Melghat, tribal region of Maharashtra. They also explored the possible causes of malnutrition among the tribes. The study included 10 village blocks which was randomly assigned. The study found that among the age group of 20-45 years women 52.1% were normal weight, 27.8% were having mild thinness, 11.2% with moderate thinness and 8.9% with severe thinness. Qualitative exploration through participatory action research found that lack of knowledge regarding signs and

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**Recived on 23.06.2018, Accepted on 14.07.2018**

symptoms of malnutrition, lack of agricultural practices, unavailability of foods in markets, lack of healthy and balanced diet, scarcity of water and affordability of nutritious foods are the causes of malnutrition among the population. Jerath et al. (2013) conducted a cross sectional study to assess the nutritional status among tribal women (n=750) in reproductive age group of Madhyapradesh. Nutritional status was assessed using BMI. It was found that 42.4% had malnutrition, in which 7.4% had severe malnutrition. Bakeera, Wamala, Galea, State, Peterson, and Pariyo (2009) explored the community perceptions and facilitating factors and common barriers in utilizing health care services in Uganda. There were total of nine focus groups, three from each village and in a focus group there were less than 15 members. Voice recordings were taken and field briefs were conducted on the same day itself. Barriers identified through analysis were service acceptability depended on health worker attitudes and practices, ill treatment of women in hospitals, local illness and treatment perceptions, fear and stigma to use some health services, perception that steps in health seeking behaviour could delay accessing appropriate treatment, not knowing about health care choices. The facilitators identified were accessibility, adequacy of services, affordability and ownership of material, human and social services. Bredesen (2013) had done a descriptive qualitative study to explore the perceptions of women in utilization of health care services during pregnancy and child birth in Laxman Jhula, village of Uttaranchal. The study was conducted among 10 women of 18-35 years who had child birth in past one year and purposive sampling was done to recruit the samples. Data collection was done through semi structured interview and collected the demographic details and perception regarding utilization of health services. The interview was audio recorded and notes were taken and each interview lasted for 60-90 minutes. An inductive analysis was done and categories and themes were developed. The perceptions for poor utilization of health care identified through analysis were lack of education regarding importance of health care, distance, cost and transportation, natural process of child birth, religious and cultural beliefs and family influences.

All these reviews show that malnutrition is a common problem among the women in reproductive age group. Hence, the researcher was interested to study the prevalence of malnutrition among tribal women and associated barriers.

The aim of the study was to determine BMI among the tribal women and associated barriers

for malnutrition which would provide an insight to their health status and make the policy makers for devoting to reduce the mortality and morbidity issues. The objectives of the study were to identify the prevalence of malnutrition and explore factors contributing to that among tribal women of Kasaragod district.

### Subject and Methods

The study has adopted a mixed method approach and descriptive survey design to identify the prevalence of malnutrition (phase1) and grounded theory design to explore associated barriers for malnutrition (phase2) among tribal women. Cluster sampling in phase1 and purposive sampling in phase 2 was used for selecting the settings and samples. The tribal settlements of Karadukka block panchayath of Kasaragod district was selected randomly as the setting. The tribal women of age group 18- 45 years residing in the tribal settlements of Kasaragod district was the population under study and the sample included 445 tribal women (phase1) and 8 tribal women (phase2) until data saturation residing in the tribal settlements of Karadukka block panchayath of Kasaragod district.

The minimum sample size needed for the study was calculated using the formula:

$$\frac{[Z_{1-\alpha}]^2 P (1-P)}{d^2}$$

$$Z_{1-\alpha} = 1.96$$

P (proportion of samples who are assumed to have malnutrition) (taken from the pilot study) =0.6

$$d \text{ (confidence interval) } = 0.05$$

The estimated sample size was 367; however it was decided to select 440 on the basis of 20% assumed attrition.

The data collection tools used were background information, Calibrated weighing machine to measure the weight in Kg, a measuring tape to measure the height in metres and Unstructured interview to assess associated barriers. The measured weight and height were recorded with calculated BMI. Tool-1: back ground information included two sections; section A: demographic proforma consisted of items like age, marital status, age of marriage, years of marital life, number of pregnancies, age of first pregnancy, number of deliveries, number of children, type of family, educational status, occupation, category of tribe, yearly family income, personal habits and section B: physiological parameter which included weight

in Kg, height in meter and BMI in kg/m<sup>2</sup>. Tool-2: was calibrated weighing machine and a measuring tape. Tool-3: Unstructured interview schedule on associated barriers was prepared by the researcher with a broad question and further questions were asked from the responses to broad question. Content validity and laungage validity of tool 1 was established. The reliability of tool 2 was done using interrater reliability and was found to be 1. Administrative permission was taken from Dean Manipal College of Nursing, Manipal, Institutional Ethics Committee, Kasturba Hospital, Manipal and from the tribal department Kasaragod and Trivandrum. Informed consent was taken from the participants and confidentiality of the information was assured. Data collection was done for the willing participants who met the eligibility criteria were asked to assemble in the community hall in their respective colony. The participants were interviewed to obtain the demographic data. Weight and height was recorded. The data were analyzed using descriptive statistics using Statistical Package for Social Science Version 16 (SPSS 16). Descriptive statistics; Frequency and percentage distribution was used to describe the sample characteristics, and malnutrition (phase 1). Strauss and Corbin's approach of open coding, axial coding and selective coding was done and the core category was evolved (phase 2).

## Results

Among the 445 tribal women participated in the study most (41.6%) of the participants were in the age group of 36-45 years and considering the occupation most (51.5%) are unemployed. Majority (80.7%) of

the participants were married and most (59.6%) of them married at the age of 18-25 years. Most (35.5%) of them become pregnant 1-2 times and majority (87.2%) become pregnant at the age of 18-25 years. Most (38.4%) of them had undergone 1-2 deliveries and 40.2% of them have 1-2 children. Most (77.3%) of them had a yearly family income less than 6000 and 38.9% had high school education. The tribal women were included in mavilan (53.7%) and malavettuvan (46.3%) subcaste of ST group. Most (45.4%) of them were having bad habit of pan chewing.

### *Prevalence of malnutrition*

The Body Mass Index among tribal women was assessed using formula weight in kg/height in metre [2]. According to the score, the Body Mass Index was categorized into underweight, severe thinness, moderate thinness, mild thinness, and normal BMI. Majority (54%) of participants had normal Body Mass Index, but 24% had severe thinness and 18% had mild thinness (Figure 1).

### *Associated factors of malnutrition*

Barriers of health care utilisation was analysed using Strauss and Corbin's Approach of grounded theory analysis. Eight tribal women who had poor health care utilization were interviewed and the interview was audio recorded and narrative notes was taken during the interview with the consent of the participants. The recordings were transcribed into local language and then were translated to English. The coding was done by repeatedly reading the translated statements. On the basis of Strauss and Corbin's approach open coding, axial coding and selective coding was done and the core

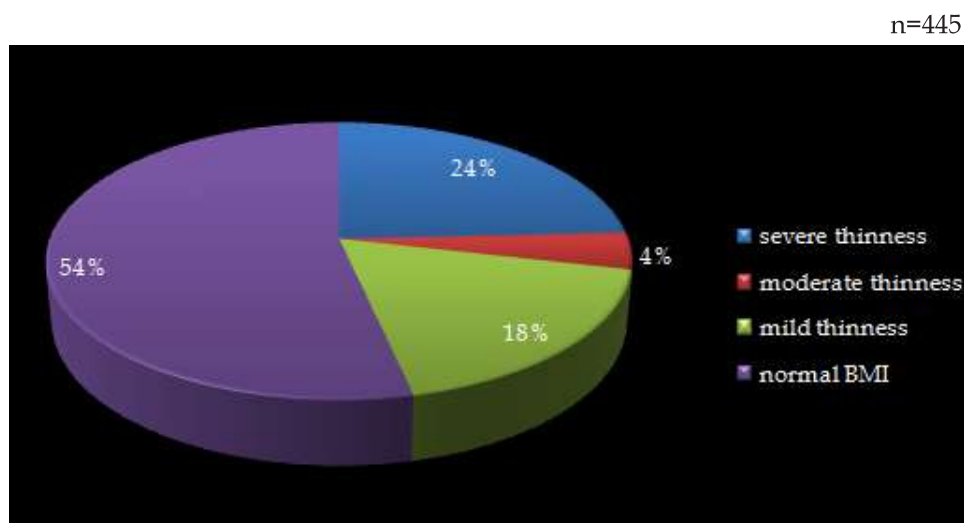


Fig. 1: Pie diagram showing percentage distribution of malnutrition among tribal women



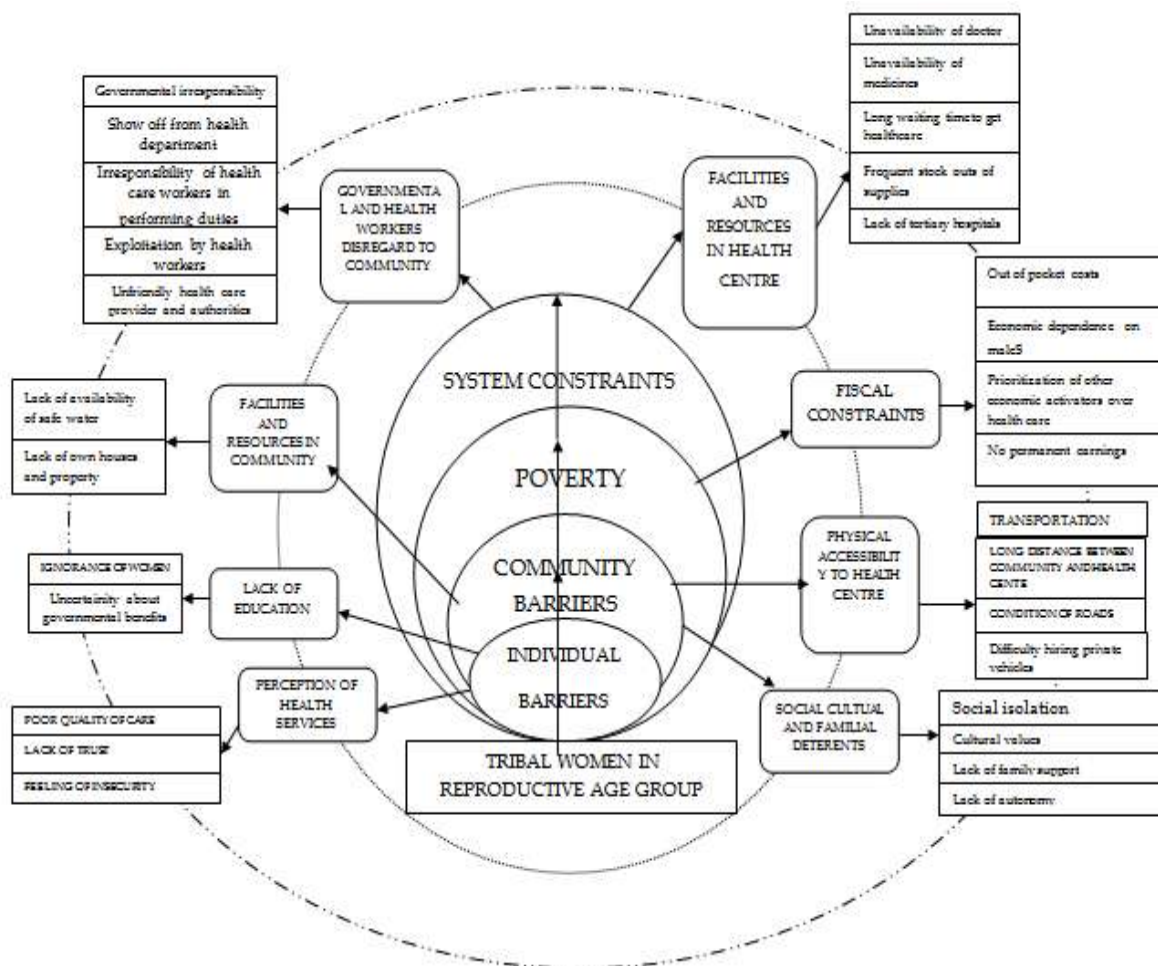


Fig. 2: schematic representation for associated barriers for healthy living among tribal women

category was evolved. According to the concept by reading the translated narrations word by word, from the raw data open coding was done in which 29 subcategories were formed. The subcategories were linked and compared to form eight categories i.e. axial coding. A core category/theme (selective coding) of the research was arrived from the categories. The core category derived was "individual and community barriers for health care utilization add on to poverty and system constraints". The categories, subcategories and core category emerged was given for validation to three experts and by incorporating the suggestions and modifications the schematic conceptual description was developed (Figure 2).

## Discussion

The present study showed that Majority (54%) of participants had normal Body Mass Index, but 24%

had severe thinness and 18% had mild thinness. The findings of the above study was similar to a study conducted in Melghat, Maharashtra to identify the malnutrition among different age groups. The study found that among the age group of 20-45 years women 52.1% were normal weight, 27.8% were having mild thinness, 11.2 with moderate thinness and 8.9 with severe thinness. (Birdi, Joshi, Kotian, Shah, 2014). The findings of a cross sectional descriptive survey to assess the nutritional status of women in reproductive age group of Rakhaine ethnic community of Bangladesh supports the findings of present study. The study found that 69% of women had no malnutrition, 20% were underweight and 11% were overweight. (Hooque et al., 2015).

The present study found that Perception regarding health services, Lack of education, difficulty in Physical accessibility to health centers, inadequate Facilities and resources in community, Social, cultural and familial deterrents, Fiscal

constraints, Governmental and health worker's disregard to community and inadequate facilities and resources in health centre was main barriers for healthy living among tribal women. The findings were supported by the study conducted to determine the utilization of maternal health services in India. In this study researcher found the causes for non utilization as perceived by the women were women consider it as non necessary, non customary, costly, inconvenience, poor quality of service, lack of time, lack of knowledge, lack of family support and no female providers. (Shah, 2011) Ganle, Parker, Fitzpatrick, and Otupiri (2014) had analyzed the health system barriers to accessibility and utilization of maternal health care services in Ghana qualitatively. The themes generated were limited and unequal distribution of skilled maternity services, women's experiences of intimidation in health care facilities, unfriendly health care providers, cultural insensitivity, long waiting time, limited birth choices, poor care quality, lack of privacy at health care facilities, transportation difficulties which are similar to the findings of the present study. The themes derived from a descriptive qualitative study to explore the perceptions of women in utilization of health care services during pregnancy and child birth in Laxman Jhula, village of Uttaranchal were lack of education regarding importance of health care, distance, cost and transportation, natural process of child birth, religious and cultural beliefs and family influences which supports the findings of the present study. (Bredesen, 2013).

### Conclusion

Tribal women belong to a minority community and the study among them has found that majority have malnutrition which is an indicator of the health status. The study also found that the barriers for health problems in reproductive age group. In order to provide them with good health status and to improve their access to health Government and health professionals have to interfere in the problems of tribal group. Various promotive and therapeutic activities should be undertaken by the health department to reduce the prevalence of malnutrition and thus to improve the living condition of the tribal women.

*Source(s) of support:* NIL

*Conflicting Interest (If present, give more details):*  
NIL

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